

ESTABLISHED IN 1861

# THE AMERICAN BEE JOURNAL

OLDEST BEE PAPER IN AMERICA

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NO. 5.



**Bro. Holtermann**, in the January issue of his journal, out-did himself in the picture business. Why, he had 17 of the most representative and leading members of the Ontario Bee-Keepers' Association all in one number! Now, don't think that 17 are all the big bee-keepers they have in Canada, for they have just lots more of them that were not represented. The 17 are a fine lot, but would have been just a little finer if Bro. Holtermann's picture could have been there also. But, then, Bro. H. had a good reason for not adding his, though doubtless many of the readers of his paper would have been pleased to see his portrait.

**Prof. Cook** says this of his new home and work in Claremont, Calif.:

I am delighted with my new home and work. This is not only the greatest bee-country on earth, but it is almost an earthly paradise. I have not as yet met the bee-keepers, but hope to soon.

We are glad Prof. Cook has found such a pleasant place to live and work in. Wouldn't it be nice if we all could be in such a delightful country? How fortunate some people are, and how happy and thankful they should be. Chicago is a pretty good place to live near—and better place to

do business in. We think we'll stand up for Chicago yet awhile, although there is more wickedness here than in a good many other places.

**To Illinois Bee-Keepers.**—The following is a copy of a postal card notice that Secretary Stone recently sent out to all the Illinois bee-keepers whose names he had. In order that it might perhaps reach still more who should become members of the Illinois State Association, it is requested that we give it a place in our columns. All bee-keepers in this State should be members in order to receive the very valuable Report soon to be published. Here is the notice.

BRADFORDTON, Ills., Jan. 16, 1894.

Dear Sir:—It is ordered that the next Report of the Illinois State Bee-Keepers' Association shall be bound in cloth, and only in sufficient numbers to supply the members. It will be necessary for those who desire it, to forward their fee of \$1.00 for membership. It was voted at the last meeting that the Secretary send return postal cards to each member in May, July, September and October, for their statistical report. To make this of interest, and have all parts of the State represented, our membership should be large, and to receive the full benefit you should be a member.

Yours fraternally,

JAS. A. STONE, Sec.

## Detecting Adulterated Honey.

—On page 810 of the BEE JOURNAL for Dec. 28, 1893, is a letter from M. R., asking for an easy and simple way of trying extracted honey. We replied, "No, we don't know of an easy way of detecting adulteration in honey, and don't believe there is any." The editor of *Gleanings* takes us to task for this, condemning the veteran bee-keeper to whom we sent the test for trial as not mak-

ing the test "sufficiently thorough," and not reading the result correctly. To this last charge "Veteran" has replied, and after reading his defense it will be in order for the editor of *Gleanings* to show what should be done to make the test "sufficiently thorough," and to show wherein he did not read the result correctly.

It will be a real pleasure for us to say that there is an easy way of detecting adulteration, and the time for that to be said seems coming nearer all the time, but when that reply was penned, we must be frank to say that we did not know the time was here yet. Perhaps we didn't know, and were culpable for our ignorance, but we think there's a good bit of excuse for it. If we are told that the test given in *Gleanings*, as taken from the *Bienen-Vater*, is simple and easy, we reply that, as given in *Gleanings*, that test is only for glucose, and glucose is not the only adulterant of honey.

*Gleanings* quotes tests of honey by the taste. We think it would be somewhat difficult for us to have given printed instructions to our Minnesota correspondent whereby he could easily tell by tasting whether honey was pure or not. Moreover, does that tasting test pretend to detect whether honey is adulterated with anything but glucose? And how many are provided with the right taste to make it called an easy test?

Will the editor of *Gleanings* kindly look at *Gleanings*, page 62, at the same opening as the one where he takes us to task? Look at the test of honey given there, with its polarization direct and indirect, dextrose, sucrose, etc. If one out of fifty of his readers can make out what it's all about, we'll own up that the thing is easier than we supposed. And if there is a simple and easy way, why go through all the rigmarole?

Now, Bro. Root, for once we want you to come out ahead. So just give us the easy formula to send to that Minnesota man, and see how quickly we'll print it.

In the first paragraph of this editorial we refer to a reply received from the veteran bee-keeper who made the test for us. Here is what he says about Bro. Root's criticism:

FRIEND YORK:—On page 63 of *Gleanings* for Jan. 15th, the editor calls attention to a matter on page 810 of the BEE JOURNAL for Dec. 28, 1893, with the intention to correct supposed errors. I am sure he did it with the best spirit, and in the interest of truth.

I am also sure he will be glad to see a reply given in the same spirit. I think the whole trouble comes from the fact that the editor of *Gleanings*, careful and reliable as he usually is, in this case is talking about something quite different from the matter in hand. I think also that I can readily see how the mistake might occur. An alcohol test printed in German was sent to the BEE JOURNAL by M. R. of Minnesota. Each of the tests directed that alcohol and honey should be well shaken in a bottle. Being a very busy man, he probably took it for granted that the tests were the same without looking farther, a mistake that a busy man might easily make, and for which the editor of the "Old Reliable" hardly ought to hold him responsible. I am thus particular to try to explain how the mistake might come, so that when at the next convention these two worthies shall be sitting on the same chair we may be spared the sad spectacle of seeing the editor of said "Old," etc., pushing the editor of the other periodical off on the floor.

*Gleanings* says that the veteran bee-keeper "did not make the test sufficiently thorough, and that he did not read the result correctly." To both of these charges I plead not guilty. To make him change his judgment in the matter, I think it is only necessary that I shall put side by side the two tests. The first part of each is practically the same. So I'll only give the parts that come after shaking the alcohol and honey together. As given in *Gleanings*, the test reads thus:

"In about a quarter of an hour there will form in the bottle a cloudy, whitish sediment; and from this, one may be sure the honey is adulterated."

The test I had to do with, as given on page 810 of the BEE JOURNAL, reads:

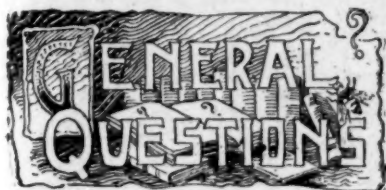
"Put in a bottle and shake the whole well, and if no sediment goes to the bottom of the bottle, it is pure honey, for pure honey would all dissolve in alcohol, and no sediment would settle to the bottom of the bottle if it was pure honey."

If I understand this last correctly, there should be no precipitation whatever, "for pure honey would all dissolve in alcohol." I followed directions implicitly, only taking more alcohol, and instead of the honey being all dissolved, it was all thrown to the bottom as a sediment. According to the test the honey was adulterated. I knew it was pure. That clearly showed that the test was unreliable. What need had I to go further?

I think I will rest the case at this point, and leave the editor to own up there are easy and simple tests for adulteration, for fear he gets shoved off on the floor.

VETERAN.

"Veteran" needn't fear that the two editors he refers to will be shoving each other off that chair. Why, bless his dear heart, Bro. Root and this editor don't "fall out" or "fall off" as easily as that. Each of us is only too glad to receive sincere and friendly criticism from the other.



ANSWERED BY

DR. C. C. MILLER,  
MARENGO, ILL.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 20 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—Ed.

### Bearing and Introducing Queens.

I wish to make a start in bee-keeping. I have one colony of blacks in box-hives, and expect to purchase one or two more colonies of blacks in box-hives. I wish to buy only one Italian queen, and rear others from her to Italianize all of the colonies, which I expect to transfer to dovetailed hives.

At what time ought I to buy the queens? and how can I best rear and introduce the queens? Can I have the virgin queens purely mated? J. H.

Brinkleyville, N. C.

ANSWER.—I wish I knew what text-book you have. One of the first things is to get a good text-book and read it over a number of times, or rather study it over a number of times, before the next season opens, and then you can be in shape to act more intelligently with less danger of failure. My word for it, a good bee-book will more than pay its way the first year. To tell all that you ought to know about rearing and introducing queens will take more room than can be allowed in this department, but after you have studied the thing over quite fully in the books, there will still be points upon which you will like to ask questions, and I will cheerfully do the best I can upon them.

It is doubtful if you can make a sure thing of having queens purely mated. It is a matter over which you have no direct control. The mating occurs up in the air, perhaps a quarter of a mile or a mile away, and if there are black bees within two or three miles of you, it lessens your chances.

So far as your own bees are concerned,

with only a few colonies, by cutting out drone-comb and by putting on drone-traps you can get rid of all objectionable drones, but you must also make sure that there are none reared within two or three miles.

Some recommend this course: Keep your young queen fastened in the hive till pretty late in the day, when drones have ceased to fly, then by opening the hive, and at the same time giving some liquid feed, you will induce the young queen to fly, while at the same time you have done the same thing with the colony or colonies having your choice drones.

Generally, the plan is to take your chances, and then keep weeding out those badly mated.

### Correct Width of Top-Bars, Etc.

What do you think is the correct width of top-bars— $1\frac{1}{16}$  or  $1\frac{1}{8}$ ? If we intend to leave only  $\frac{1}{4}$ -inch space between the top-bars, it seems to me we will have to make the top-bars wider, or it will crowd the brood-combs too narrow. If the width of the natural brood-comb is  $1\frac{1}{4}$  inches through, it looks to me as if we ought to have the top-bars the same width, as the brood would be in the frame below.

Also, what is the depth that will answer the purpose of thick top-bars? Will  $\frac{5}{8}$ -inch thick answer just as well as  $\frac{3}{4}$  or  $\frac{7}{8}$ ? Which of the three do you prefer? G. D. L.

Tacoma, Wash.

ANSWERS. — The dimensions of top-bars belong to some extent to matters that are unsettled. The tendency for some time has been to have them narrower than formerly, and with my present light I should prefer  $1\frac{1}{8}$ . Some say that this is too close, and that bees will fill such a space in an objectionable manner sooner than a wider space. I should explain that with a top-bar  $1\frac{1}{8}$ , spaced  $1\frac{1}{8}$  from center to center, there is  $\frac{1}{4}$  space between top-bars. From careful measurements I have found that  $\frac{1}{4}$  inch is the space that bees leave between two surfaces of comb when filled with honey and sealed over, and also the space they leave between the surface of a section and a separator. I have also tried top-bars with the  $\frac{1}{4}$  inch space between them, and so far with success. It is just possible, however, that on further trial—that is, on longer trial—I may find the bees filling in wax or propolis. But I build a good deal on

the natural preference of the bees for the  $\frac{1}{4}$  inch space.

No, brood-combs are not  $1\frac{1}{4}$  inches through. A new worker comb is  $\frac{1}{4}$ -inch thick, and with increasing age it slowly increases in thickness. The oldest combs I ever measured were about 25 years old, and they were one inch thick. I have reference now to comb that is used for brood-rearing; that which is used for storing honey varies greatly in thickness. The bees like a space of  $\frac{1}{4}$  to  $\frac{1}{2}$  inch between the combs where the brood is, but only  $\frac{1}{4}$  where the honey is.

I prefer a top-bar  $\frac{3}{8}$ -inch thick, and I notice the Roots are changing to that thickness.

#### Honey Candied in the Comb.

I send you by this mail a half section of something that I bought for honey at our grocery last night. The grocer had perhaps a half dozen combs of it, that had been taken out of the sections, and they were all like the sample I send you—entirely solid—candied through and through. To me it tastes like brown sugar. What do you think of it, or Dr. Miller? Such honey (?) as that put upon any market, is certainly enough to ruin it.

I believe the grocer said it came from California, or at least the sections were so rubber-stamped. Please answer in the BEE JOURNAL.

Blackwood, Ills.

D. S.

ANSWER.—Bro. York sent the honey to me after he had made a meal of it, (I don't think it took a very big lot to satisfy his appetite,) and I must say I think I have produced better honey myself. On the other hand, I must confess I have produced a good deal worse, for one year, a good many years ago, I produced some of the blackest, vilest stuff I ever saw gathered by the bees.

The present sample is not very dark, with a reddish cast, most of it candied, but one spot which was not candied was clear and of fine consistency. Tasting a very little of it, one would say it was almost without flavor, but a larger sample shows a flavor which, while it is not very strong, is decidedly distinct—a flavor that I don't think I ever met in honey before. If you call it medicine, I should say it was quite easy to take, but if you call it honey, I am not at all hungry for honey.

I should hardly have thought of its having a brown-sugar flavor, still, if you

slowly roll it around in your mouth in a meditative manner, and think brown sugar real hard, you may recognize something in that line. I doubt, however, if there is anything like brown sugar in it. I don't know what it is, but I think very likely there may be a plant somewhere that produces just that sort of honey. But I'm not anxious for any of the seed.

After all, there may be some who like the flavor. You know the Australians take it in high dudgeon because the Londoners say that eucalyptus honey is not fit for the table, although it is valuable for its medicinal qualities; while the Australians think the flavor wonderfully fine. Tastes differ.

#### Purifying Beeswax with Acid.

I purified some very dark combs with the sulphuric acid process given on page 8, of Vol. 32 of the BEE JOURNAL. It worked highly satisfactory, giving the wax a nice straw color, as we were assured it would be.

As my market is direct with foundation manufacturers, I am curious to know whether bees will accept comb foundation made from such wax, as readily as that rendered without a foreign substance.

This is a question which comes very close to both the manufacturers and user of foundation, and I would be pleased to hear about it.

Henderson, Ill.

N. S. H.

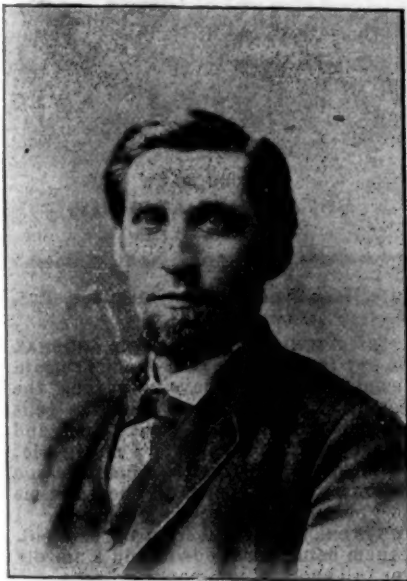
ANSWER.—If I am not mistaken, foundation manufacturers have distinctly said that such wax is as good as any, and I don't remember to have seen any report to the contrary. If any beekeeper has had an unfavorable experience, by all means let it be given; and it might be well to hear from those who have had experience, no matter what the result.

It is somewhat reasonable to suppose that the acid does not hurt the wax. You may remember that our grandmothers used to make beeswax corks for their oil of vitriol bottles, and oil of vitriol is only another name for sulphuric acid. Lacking glass corks, beeswax was about the only thing they could use that the acid wouldn't eat up or burn. The wax cork was not in any manner affected by it, and when acid works on the "slumgum," why should it do any more than to burn out the foreign matter, leaving the wax untouched?

# BIOGRAPHICAL

## No. 67.—Hon. H. F. Coleman.

During the past year a somewhat new aptarian writer appeared in the columns of the BEE JOURNAL. Although his



H. F. COLEMAN.

name seemed new to the bee-fraternity at large, yet his writings on the subject of bee-culture showed that he was not a stranger to the practical care of the little honey-gatherers.

Further than a pleasant "corresponding" acquaintance with the subject of our picture and sketch this week—Hon. H. F. Coleman—we are unable to say in regard to him as a man, as a friend, or as a bee-keeper. But through the kind-

ness of a friend both to Mr. Coleman and to the BEE JOURNAL, we are permitted to present to our readers the following entertaining life story, written by Prof. H. J. Bostic, Principal of the McKimney High School, at Sneedville, Tenn.:

A large man, finely proportioned, with a most graceful carriage and self-poise, and withal handsome—thus has nature endowed Henry F. Coleman, who was born in Hancock county, Tenn., on May 13, 1847.

As a lad, Mr. Coleman was trained in public schools accessible to him, at an early age; in fact, he says he does not remember a time when he did not know the alphabet, or how to read in small primers used in the schools of his day.

His father was a well-to-do farmer, but his wealth was consumed by the Civil War, at the close of which my subject was in poverty, and thrown out on the broad waves of stern life to pilot his ship over its unfriendly seas and adverse circumstances, with his health somewhat broken.

In time of the War, he enlisted as a private in 11th Tennessee Federal Cavalry, and in a few days from his enlistment, while in battle, was thrown from his horse, receiving injuries from which we date the turning point of his career. He, from his youth, had been fond of books and reading, but these now became his constant companions.

At the age of 21 he was elected magistrate, and became an active member of the county court of Hancock county, doing much and permanent good for his county. He exhibited such a desire for the right in these courts, that at the age of 25 he was elected tax assessor—a very important position for one so young.

About this time he began the study of law, and after completing the course, was admitted to the bar, and almost at one bound went into the first ranks of attorneys, which position he still occupies. It is said that he has appeared as counsel in as many, if not more, murder cases than any other attorney of his age in the State of Tennessee, and perhaps any other State of the Union; and as a land lawyer, he has few peers; he is also well versed in equity jurisprudence.

He was elected to the State Senate in 1880, and became noted, while a member of the Senate, as a constitutional lawyer, and made a good reputation otherwise.

The pay of only \$4.00 per day, allow-

ed as State Senator, he thought did not justify him to stay away from his other business, and consequently one term in the Senate is all he asked of his friends.

He is now United States Commissioner, and Secretary and Treasurer of the Powell's Mountain Mineral Railroad Company, and has a controlling interest in a mercantile establishment. It is difficult to see how any one man can do so many things, and at the same time be a successful bee-keeper, but his success in this line is beyond that of any other person in this county. His success in all his undertakings is the result of energy, industry, and method and tact combined.

He has always been a lover of the honey-bee, but by reading the writings of Mrs. Ellen J. Tupper, about the year 1866, he became an enthusiast in bee-culture, and his enthusiasm has never abated. He has owned bees at times since 1869, but never found himself in a position, as he thought, to make a specialty of bees until the last few years. He now has two apiaries. His home apiary of 60 colonies is a model of beauty and convenience, and is well equipped with all the modern appliances.

If there is one thing that he delights in more than another, it is his apiaries. His love for books and study eminently fits him for this industry, and he sometimes expresses a wish to give up everything else and work with his bees alone.

Mr. Coleman now enjoys the consciousness of having come up from poverty to where he can count his thousands of well-earned dollars, but his efforts now are not so much to make money as to build up and make better the conditions of his fellow man.

He is charitable almost to a fault, but he claims that there is a pleasure in giving to the needy that is never realized or understood by those who do not give, and that those who do not give in cases of real charity lose much of the pleasures of life.

Mr. Coleman is a ready writer, and for 20 years or more he has been a constant contributor to the literature of his country. His writings, whether on bee-culture, politics, education, or anything else, are always well matured, and fondly sought by those who know him. He is the author of no books, but perhaps no one has written on a greater variety of subjects with such unsurpassed success.

It was through his efforts that the East Tennessee Bee-Keepers' Association was organized, which institution promises to do much for the bee-keepers

of East Tennessee. He is now its Secretary and Treasurer, which positions were forced upon him, but he gives them their deserved attention.

Let us conclude this short life-story by saying that Mr. Coleman has risen from poverty to distinction; he is a capable man—capable of filling the very highest place in the estimation of his friends, and his great social nature makes him respected and loved by all. A careful perusal of his life will enable one to understand the elements and principles it takes to make a success in bee-keeping as well as anything else in life.

H. J. B.



CONDUCTED BY

MRS. JENNIE ATCHLEY.

BEEVILLE, TEXAS.

#### Queenless Nuclei, Cyprian Bees, Etc.

MRS. ATCHLEY:—In the BEE JOURNAL you say that you let your nuclei remain queenless for three days, and then the bees will be sure not to tear the cells down. I wish I could say as much and tell the truth. Whenever I put in a lot of queen-cells without protectors, no matter how long nor how short a time the bees have been queenless, I always calculate on at least 25 per cent. of them being torn down, and I hardly ever fall short of the mark.

You also say that you keep your best breeding queen penned off on three combs, and only let her lay enough to supply you with larvæ for rearing queens. I have tried keeping prolific queens confined to a small space, and in every case where they were confined to any length of time, from one to a dozen eggs could be found to the cell. I have also tried keeping them in upper stories with half-depth combs with an excluder between, and the result would be the same.

CYPRIAN BEES.

In another number of the BEE JOURNAL, for Sept. 28, 1893, you say if any-

body has a bad, fighting Cyprian queen, to just send her to you. If I could go back five years, I think I could give you satisfaction about Cyprian bees. I have tried them, and never expect to try them again. I never found but one real, good point with them, and that point was near their tail ends!

Mrs. Atchley, I can handle any bees that can be handled at all—in fact, I have never seen any bees that I could not perform any operation with, that I wished to, but if I had to go back to the Cyprians, I would surely quit the field, unless I should do like A. I. Root says—keep them away off in the woods.

I have seen colonies of these Cyprian bees so vicious that all one had to do to start them was to get within about a rod of their hive, and stamp on the ground. They would do the rest. They would come like shot—not just a few, but by the hundreds, and if you did not make quick your retreat, they would come by the thousands.

#### CONDEMNING SOUTHERN QUEENS.

I have noticed in the bee-papers of late, several articles condemning Southern-bought queens, which I think is very damaging to Southern queen-breeders that rear good queens. I know, and so do you, that as good queens can be reared in the South as can be reared elsewhere, and that there are some breeders at least that rear such.

Now as the majority of the Southern-reared queens go to the North, I think if such articles must be published, it would be better to give the breeder's name as well. I do not mean to say that every time a customer complains that the breeder's name should be put before the public—some will find fault, no matter how the queens are.

JAMES CLEVELAND.

Decatur, Miss.

Friend Cleveland, I do not wish to convey the idea that *every* cell was saved, but the greater part of them. Some cells are injured and never hatch. We do not now use any cell-protectors—they proved a nuisance to us. We keep our breeders penned off, but we use their eggs, or a greater part of them, in grafting, and keeping up nuclei, and *always* have at least one comb for her to lay on. I have not noticed two eggs in a cell of any of my breeders for a long time. It is owing to how you keep them, about that.

Yes, I am in love with stinging bees. I had Cyprians ten years ago that would run cattle off the prairie 200 yards

from their hives. I had no trouble in handling such bees, and I always found a well-filled hive at harvest time. I have not had any Cyprians for nine years, but I am sorry that I discarded them. While the Italians are superior for almost all purposes, I will take Cyprians for honey. They are bees that always take care of themselves, and if properly handled they are not bad stingers.

JENNIE ATCHLEY.

#### Drones from Fertile Workers, Etc.

Are drones from fertile workers capable of fertilizing queens?

From careful observations made several years ago, I claim that they are just as much so as drones from any queen, and for the benefit of those who think differently from myself, I will here give the facts in the case that led me to think as I do.

Several years ago I had nothing but pure Cyprian bees, and, as all know who have had them, they are very apt to have fertile workers when from any cause they become queenless. So, late in the fall of 1885, I believe it was, I had a very strong colony that became queenless. I at once sent for a queen, but failed to introduce her, and fertile workers set to work at once, and soon had the combs filled with drone-brood. I thought to myself, "Now will be a good time to see if these little 'Bantam' drones are capable of fertilizing queens." So I gave them a frame of brood from a good queen, and they at once started queen-cells, and just before they hatched I put a division-board in the hive, and gave each portion a cell, and in due time they both had queens; but, mind you, these little "Bantam" drones were hatching by the thousands some time before these queens hatched, and I positively *know* there were no other drones in my apiary but these little fellows, and there was no one else in the country at that time that had any yellow bees but me—a *very* few bees of any kind were in the county, as I lived in a very poor place for bees at that time.

Now for the result of these two queens: They both took their wedding flight Christmas week, and showed signs of having met the drone. (It was a very mild and open winter up till and after Christmas awhile), and early the next spring these two queens went to laying just the same as other queens, and their bees showed all the markings of pure Cyprians. Now, how could these

queens have met any other but these little drones?

#### THE FIVE-BANDED BEES.

"I see that some of the big guns keep giving the 5-banded bees 'down the country.' Now I have no 'ax to grind,' as I have neither bees nor queens for sale, but I have tried both strains for the last two years side by side, and, candidly, I can see no difference as to their working qualities. And why should there be?

Some say they have been bred in-and-in so long that they have become weak, and are not hardly like others. Others say they have been bred for beauty until their business qualities have about all been bred out of them. I admit that the latter statement sounds more reasonable, but I hardly think such is the case, at least not with the ones I have been testing.

As to in-and-in breeding, who will say that the Cyprians are not a hardy and an energetic race? And they have been bred in-and-in for perhaps thousands of years, on the small island of Cyprus.

We all admit that in-and-in breeding is detrimental to most, if not all, of our domestic stock, but I don't think such is the case with bees, at least the evidence we now have doesn't seem to point that way; and if the so-called 5-banded Italians have a good share of Cyprian blood in them (and I believe almost all of our best authorities agree that they have), I would rather think that they would be a superior race to the common 3-banded Italians, than to think they would be an inferior race, as some are now claiming them to be.

I have not written the above as a fling at any one, but have only tried to present the case as it appears to me.

#### CURING BEE-PARALYSIS WITH SALT.

I wonder how much longer this remedy is going to be recommended in the different bee-papers. I know that it *won't* cure the nameless bee-disease or bee-paralysis we have here in Texas, for I have tried it in every way that I have seen recommended in the different papers, but all to no effect. I have tried putting dry salt on the bottom-boards for weeks at a time; also feeding honey or sugar syrup strongly tinctured with salt, for a month at a time; then I tried sprinkling the bees and brood with salt water, and giving the bees salt water to work at all the time, but all to no effect. I also tried chang-

ing the queens, but that, too, was a failure with me.

I have found but one way that it can be cured, and that is, by taking all the combs and brood from the affected bees and giving them a new hive and frames, and letting them build new combs. This has not as yet failed to cure them, but the trouble is, they will not stay cured.

Now, who can help us out? I am very sure that bee-keeping will soon be a thing of the past in this part of the country, if we don't get some remedy that is effectual and sure, for I am confident that more than  $\frac{3}{4}$  of the bees in this country have died from that cause alone, in the last three years.

Lometa, Tex.

L. B. SMITH.



### Dividing Colonies for Increase.

**Query 908.**—1. Which is the better plan in dividing swarms, to leave the old queen in the old hive, or move her into the new one? 2. How early in the spring would you commence to divide?—L. W.

1. I prefer leaving her in the old hive.—J. M. HAMBAUGH.

I have had the best success to let them alone and not divide.—H. D. CUTTING.

1. Move the queen. 2. When the hive is full of bees and brood.—DADANT & SON.

1. Leave the old queen where there are the most workers and the least brood.—M. MAHIN.

1. I would put her into the new hive. 2. Just before the time for swarming.—EUGENE SECOR.

1. Move her to the new hive. 2. In Michigan, about June 13th, if running for increase solely.—J. H. LARRABEE.

1. Remove the old queen to the new hive. 2. Not until the bees would commence to swarm naturally.—C. H. DIBBEN.

1. I do not know as it makes any difference. 2. That would depend upon

whether I wanted bees or honey. In either case, however, I should wait until the hive is full of bees.—EMERSON T. ABBOTT.

1. Leave her on the old stand. 2. About the time the bees make preparations for natural swarming.—C. C. MILLER.

1. Better move her into the new one. 2. When the colonies are on the eve of swarming, and drones flying.—J. P. H. BROWN.

1. I always put the new queen with the old bees, leaving the young bees to take care of the newly-hatched queen.—J. E. POND.

1. Move her into the new hive. 2. The best brief answer would be: About the beginning of the swarming season.—R. L. TAYLOR.

1. I prefer to move the old queen to the new location. 2. Not much, if any, before bees begin to swarm naturally.—JAMES A. GREEN.

1. Leave the old queen with the old hive on a new stand. 2. I would not "commence to divide" at all. I don't believe in it.—G. L. TINKER.

1. Leave her in the old hive. 2. When the hive is well filled with bees and brood, and honey is coming in from the fields.—G. M. DOOLITTLE.

1. Move her to the new one; but a better way is to let them do their own dividing. 2. I wouldn't divide as a substitute for swarming.—A. B. MASON.

1. Take the queen to the new location, and introduce a queen at the old stand. 2. In my location, during fruit-bloom is the best time.—MRS. J. N. HEATER.

1. I should move her, if I practiced dividing; but I have no doubt that it is better to let the bees swarm. Dividing takes time and gives a less return in honey.—A. J. COOK.

1. I now leave the old queen on the old stand. 2. Not much earlier than natural swarming time; if you do otherwise you may experience heavy loss.—MRS. JENNIE ATCHLEY.

1. I think I would place her in the new hive, though it probably makes little difference. 2. As a rule, I do not practice division, preferring a natural swarm.—MRS. L. HARRISON.

1. That depends upon what method of increase you adopt. Very many beekeepers now put the queen into the new hive. 2. About the time bees swarm naturally.—P. H. ELWOOD.

1. Move her to the new stand. 2. When numerous enough to fill the hive, and cover the combs well and start queen-cells, thus showing that they are in condition to soon swarm if left to themselves.—S. I. FREEBORN.

1. I would give her to the new hive. It is the natural way. 2. No definite answer can well be given. It depends upon the condition of the colony. It should not be attempted, however, until the white clover harvest is well under way.—WILL M. BARNUM.

1. Leave the queen in the old hive. 2. Never divide a colony of bees as long as there is room for them to work to advantage in the one hive. When the hive is crowded for room, then take combs of brood and bees, but don't draw on them too hard at any one time.—E. FRANCO.

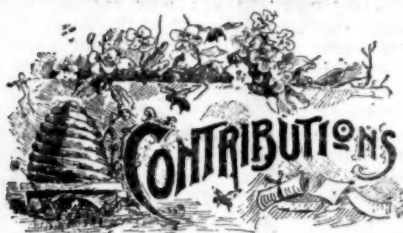
1. I have done both ways, but I do not know from experience that it makes any difference, but I prefer the old queen in the hive that appears to have the less of the brood. 2. I am governed entirely by the strength of the colony to be divided, as soon as the drones have appeared.—JAS. A. STONE.

1. You may practice either plan, but if you want to secure a honey crop, you will succeed best by leaving the queen at the old stand where most of the field workers adhere and make a working-force that can secure a fair yield of surplus honey. My experience teaches me that it must be an extra-long and good season if both divisions can be made to gather surplus.—G. W. DEMAREE.

#### The Parliament of Religions.

We take great pleasure in announcing to our readers the publication of a work interesting and valuable to all, "The Parliament of Religions" at the Columbian Exposition. It is now issued complete in one large octavo volume, and is a very careful compilation of all of the proceedings—at once a fascinating story and a book of universal value. A narrative of the grandest achievement in modern religious history. The book contains origin of the Parliament of Religions; proceedings of every meeting of the Parliament; speeches delivered and papers read at every session of the noted gathering; the beliefs of the various religious denominations; opinions of eminent divines in regard to the Parliament; influence of the Parliament upon the religious thought of the world. Published by F. T. Neely, Chicago. 1000 pages. Price: Cloth, \$2.50; Full Sheep, \$4.00.

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### Non-Swarming Strains of Bees.

Written for the American Bee Journal

BY J. E. ARMSTRONG.

It seems to me that Mr. S. E. Miller, in the *BEE JOURNAL* for Dec. 28th, does not quite present the question fairly. In the first place, there is not necessarily an inseparable connection between increase and swarming; that is, the two instincts, while intimately associated, do not advance with equal pace. We speak of a swarming-fever when several swarms issue from a hive in quick succession; the second and subsequent swarms issuing under the migratory fever. We also recognize that these two instincts vary when we speak of a race of bees as being more liable to swarm than some others, as the Carniolans; and another as more prolific and less apt to swarm, as the Italians. I do not believe that many bee-keepers will admit that Italians are as liable to swarm as the common black bee, while all admit the former are more prolific than the latter.

These are simply two of the instincts of the bee. Now does Mr. Miller wish to maintain that instincts cannot be changed? If so, let him explain the peculiar instincts of the various breeds of domestic pigeons. All these varieties have been produced from one parent stock, but man has taken advantage of seeming accidental variations of structure and instinct to perpetuate these variations by selective breeding until the desired peculiarity has become fixed.

He asks further, "why all birds build nests, lay eggs, hatch and rear their brood each spring;" and then answers it by saying, "Because they are built that way." Now, I do not suppose I am telling Mr. Miller anything new when I say that *they are not built that way*, for some birds do not build nests and rear their young. The cow black bird and the European cuckoo lay their eggs in the nests of other birds, and so do not

take the trouble of rearing their young; while the domestic canary has lost the instinct of weaving a nest even when set a liberty in its native land. If man has bred out the desire to root from swine, and the desire to sit from the domestic fowl, why not the desire to swarm from the bee? It is not that man has tried to produce a strain of fowls that would produce only pullets, but non-sitters, and this has been well done. Now in the same way we do not wish to produce a strain of queens that will lay no drone-eggs, but will lay few drone-eggs, show the least or no desire to swarm, and yet lay an abundance of fertile eggs.

If we could control the mating of queens as we can the breeding of stock or poultry, it would be an easy task to take advantage of the various peculiarities of queens and perpetuate them. No wonder we soon "lose sight of the non-swarming strains of bees," for although that peculiarity has often shown itself among strong and prolific queens, yet it scarcely runs to the second generation, because we are practically helpless when it comes to mating. When the gaunt, ungainly swine, sheep and cattle of thirty years ago have had their very bones and hoofs bred into monstrosities of fat "lean;" when the scratching, crowing, ever-sitting biddy of a few generations ago has been changed into a plump, handsome fowl that lays "two eggs a day and three on Sundays"—(if I am wrong in this, Bro. Miller can correct me)—leaving her eggs to be hatched by steam, and the chicks to be reared by electricity; when the seeds have been bred out of grapes and oranges, leaves that never unfold bred into the cabbage, and monster roots bred into the turnip and the beet, why should we not expect to breed out the swarming-fever from the honey-bee?

As I said, the one drawback is the fact that we are as yet unable to control the mating of the queen, and so cannot develop peculiar traits or instincts—but is it impossible? Queens have mated in confinement, or within the hive in rare cases. May it not be that some one will succeed in developing this into an instinct by a little patience and repeated effort? If this can be once established, there is no limit to the possibilities in selective breeding, running out into the various lines of utility and beauty, but until this is done, all breeding of bees will be a matter more or less of chance. Here is a great field for experiment, and the man who solves this problem will confer as great a boon upon the art of

bee-culture as Father Langstroth did when he gave us the movable frame.

About the same time that our Creator gave the command to living things to "be fruitful and multiply," He also said to man, "subdue and have dominion over every living thing that moveth upon the earth." If I understand this, it means to breed out undesirable instincts and breed in desirable ones, so that all these creatures shall better serve him and contribute to his well-being and happiness.

Englewood, Ills.

## Something About Beginning Bee-Keeping

*Written for the American Bee Journal*

BY MRS. B. J. LIVINGSTON.

"I wish to make some money that my husband will have no business with; think bee-keeping will be just the thing. Please tell me how you began." This and more like unto it.

Dear Madam, I judge from your whole letter that you are inclined to flaunt the red garment they use in Spain to stir up the animals. Don't do it. Bee-keeping needs the cheerful co-operation of the whole family more than any other business I can think of. With a little indiscretion on your part, your men folks would soon regard every bee that passed them on the wing, or lit upon their watering-trough, as a natural-born enemy.

Another thing puzzles me—how are you going to separate your own interests from those of your family? If you can do it, you have a better head for arithmetic than I have. No one could have a stronger desire than I had, to do it all myself. Not from a selfish motive, but because my family had care enough on their hands. When my first and only pure Italian swarm came out and settled 40 feet from the ground on a limb of a giant oak, that projected out over our heads, I was helpless, and would soon have been pure-queen-less, had it not been for the harvest hands.

I'll not tell how many of them were how long in trying to throw stones to hit the limb to jar or unsettle those bees. Finally, one shot a bullet through the limb between the bees and the tree. Soon another threw an iron with a cord attached, over the limb, when a rope was drawn over, and the limb violently agitated until it broke where the ball had weakened it. Thus we often get

left if we try to be too independent. We saved that swarm.

Bees are liable to do very unexpected things, especially with a novice.

As to how I began, is it not all written in the books. One thing was in my favor—I had nothing to unlearn. One could not have been more ignorant of bees than I was six years ago. I never saw a section of honey until I took it off my own hives. I wonder how many could sympathize with the feeling that prompted me to go to the room again and again to look at that honey. It was not its financial value I thought of, for the extent of my ambition at that time was to have honey enough for the family, and perhaps a few pounds to present to friends to whom I was indebted for many kindnesses.

My beginning is too long a story to write here, only to say that I read up, just as a lawyer or doctor would, before setting out to practice. You really cannot succeed if you depend alone upon what you can pick up from mouth to mouth. You would soon be in a worse fix than the man who had a bad cold, and concluded to try every remedy that sympathizing friends offered.

Buy at least one good standard bee-book, and subscribe for at least two bee-papers. Of course you will need two colonies of bees to stir up once in awhile, so as to learn to bear bee-stings with equanimity.

Centre Chain, Minn.

## Longevity of Bees—Pulled Queens.

*Written for the American Bee Journal*

BY CHAS. H. THIES.

In reading Mr. Bellamy's article on page 755 of the BEE JOURNAL for 1893, I thought I would give a little of my experience in regard to longevity of bees.

I noticed this a number of years ago. My attention was first called to a colony that at all times contained but little brood. At that time I reared queens for my own use only, consequently I was not so particular in keeping a record of their age. Of course I thought she was falling, and my intention was to soon replace her; but as the honey-flow was poor, I lost a little interest in the bees for the time being, consequently I neglected to re-queen this colony.

But when the time came to prepare them for winter, this colony was the strongest in my apiary of some 100

colonies. It had plenty of honey, more than any other colony, yet as before but little brood. The next season this colony was to be noticed closely.

They started in the same as before—when other colonies had their hives well filled with brood, this colony had perhaps enough brood to well fill four or five frames; but when the honey-flow came, they were in splendid condition—in fact, they stored more honey than any other colony.

I then decided to use this queen for breeding purposes; while I had queens that produced better looking bees, yet I thought that the other good qualities of this queen would more than overbalance the looks, as large crops of honey are usually wanted first, then looks may be considered.

Now while the bees of this queen lived longer, they not only had from five to ten days more to gather honey in, but all the honey that was saved in rearing less brood than other colonies did, went in with the surplus, which surely should be considered; besides, there were less bees required to stay in the hive for feeding larvae, etc.

Now, if these bees did not live longer, why was it that they were at all times strong, with but little brood at any time, and always stored a surplus when any was to be had? I myself was satisfied that they lived longer, before I ever read a word on this subject.

#### DR. MILLER'S PULLED QUEENS.

In regard to Dr. Miller's pulled queens, I will say that I have practiced pulling queens to a considerable extent, and with good results. Of course, care should be taken not to pull them too soon—if pulled while quite white, I have no use for them, yet I prefer to let them pull themselves.

A queen-cell will often be accepted when a pulled queen will not. Suppose you have a colony that has been made queenless an hour since. You find you have an extra queen-cell—one that is just about ready to hatch; if this cell be placed in the queenless colony, it will most likely be accepted, while if you pull the queen and place her in the colony, she will more than likely be pulled out at the entrance.

As I have other business besides bees to attend to, I have often neglected to cut out the cells soon enough. I don't believe in cutting out queen-cells as soon as they are sealed, or a little after, but prefer to leave them in the hive where they were built, as long as pos-

sible. I often cut them out at two or three different times—this I do as follows:

Take out the frame having the cells; hold it before the sun, or a light, then cut out all cells in which you see the queen moving. Replace the frame, and in an hour look them over again.

As above stated, a queen-cell will often be accepted, where a pulled or a virgin queen will not. When it does occur that five or six queens hatch out before the cells have been disturbed, I often catch the queens, put them back into the cells, and cover the point of the cells with a thin piece of wax—not too much wax should be used; neither should it be made air-tight. These cells may be distributed, and will be accepted as though the queens had never been out of the cells.

Of course these methods are used mostly when no honey is coming in. When plenty of honey to be had, almost any kind of a queen or cell will be accepted by a queenless colony.

Steeleville, Ills.

### Wintering Bees in Oregon, Etc.

*Written for the American Bee Journal*

BY J. H. BERRY.

As this climate is warm and damp, wintering bees here properly is quite different from that of a cold climate. The important thing is to keep them dry, and the way I do that is by placing burlap on the brood-frames, then set the top story on, and fill it full of dry sawdust, and the bees come through dry and nice, with the loss of but very few of them. They commence brood-rearing in January.

#### FEEDING BEES IN WINTER.

The best way I have yet tried to feed bees in the winter, is as follows:

Make thick syrup of granulated sugar, and fill a  $\frac{1}{2}$ -gallon fruit-jar, tying a piece of thin cloth over the mouth of the jar—such as flour sacking is good. Spread a burlap cover over the brood-frames, and cut a piece  $\frac{1}{2}$  out and turn it up, then set the fruit-jar of syrup bottom side up on the frames where the hole is in the burlap. Have the hole just large enough for the can.

Then put on an empty story and fill it with dry leaves, sawdust or chaff. The bees will cluster on or close around the jar, and will winter as well as they would if they were in a hive full of

honey. The syrup must be good—not watery and thin. Feed them more the same way in the spring, or they will be likely to get out of stores and starve, or be slow to start up brood-rearing.

#### PREVENTION OF BURR-COMBS.

Use brood-frames with a top-bar  $\frac{3}{4}$  inch thick and  $1\frac{1}{2}$  in width; space  $\frac{3}{4}$ -inch between them, and you will not have very much trouble cutting brace-combs out. That has been my experience with them. Dr. Miller reports about the same in *Gleanings*. I cannot get as nice combs built on frames made of  $\frac{3}{4}$ -inch lumber as on those made of  $1\frac{1}{2}$  inch.

#### THE 5-BANDED ITALIANS.

I would like to hear about them from more of those who have tested them as honey-gatherers. I have tried a queen of that strain, or that claimed to be such, but only 3-banded, and they did not swarm the first year, but did the second, and then the queen died. But they proved to be the best of honey-getters. They would get sweets as long as any were to be had, but they were only 3-banded. I have 5-banded ones from Missouri.

Gale's Creek, Oreg.

### Bee-Stings and Rheumatism Again.

Written for the American Bee Journal

BY DR. E. GALLUP.

When I lived in Ventura county I went down to the city to get some bee-hive lumber, and stopped at a hotel kept by a widow who was also boarding the county poor. The first night there was such screeching, screaming and groaning that no one could sleep in the house. I found out in the morning that the noise was made by a young man who was suffering with rheumatism. I told the landlady to have a boiler of hot water when I came in at night, and I would stop his yelling so we could all have a good night's rest.

Well, at night I gave him a hot bath and a good, strong massage, with Swedish movement, and he slept until 9 o'clock the next morning. When I left, I told him I should be down with a team for my bee-stuff in two or three days, and then I would take him home, cure him, and he could work for me to pay for board and treatment, as I should want a hand in the apiary. I took him up according to agreement.

Well, the season turned out a poor one, but he stuck to his crutch and aped lameness, for he was having too good a time to leave. I was debating in my mind how to get rid of him, for I hated to send him off with no prospect of his getting work, and he was entirely destitute of means, and nearly destitute of clothes.

One day I set him to hoeing up some weeds in the apiary. I told him to be careful and not hit a hive, and the bees would not molest him. I was sitting in the shanty facing the apiary and writing. He was hoeing very lazily, and leaning on his crutches; when all at once I saw the hoe flying through the air in one direction, the crutches in another—and his hat and bee-veil in another—and Upton came tearing for the shanty. He never turned out for a hive, but jumped over them, never stopped to unlatch the door, but burst it open, threw himself in the middle of the of the room on the floor, and all the time crying as loud as he could bawl; tearing his hair and swearing at the same time.

I laughed until my false teeth ached—or, rather, fell out of my mouth.

It turned out that he hit an old-fashioned Langstroth hive a good, smart rap with his hoe, and at the same time pulled out the stick that closed the back ventilator. The hive contained a strong colony of hybrids, hence the result.

As soon as he cooled down a little, he said: "Why, Doctor, do you know that bees bite with their hinder end?"

As soon as I could reply, for laughing, I said: "Well, Upton, you have made a discovery and so have I. You have discovered that bees bite with their hinder 'end,' and I have discovered that bee-stings are a sure cure for rheumatism. You have been playing 'possum for a long time. You have never deceived me one particle, but I have had compassion on your destitute condition, and so have said nothing. Yesterday there was a man here looking for some one to drive a team. Now, leave your crutches and go to work for the man. Earn some clothes and support yourself like a man."

Now that is how I know that bee-stings are a sure cure for rheumatism. I have been thus explicit in giving all the particulars and circumstances, so that others can apply the remedy in the same manner, or it might not have the same effect. The hot baths, massage and Swedish movements are only for the purpose of satisfying the patient that there is something being done. It also

satisfies his mind until you can get his system in the right condition to apply the final remedy.

Santa Ana, Calif.

P. S.—The reader may think that the preliminary treatment was what cured the man, but I know it was the bee-stings, for I saw the result with my own eyes.—Dr. D. G.



### The Michigan State Convention.

*Reported for the "American Bee Journal"*

BY W. Z. HUTCHINSON.

(Continued from page 120.)

Mr. M. H. Hunt next read an essay, on the

#### Future of the Supply Trade.

The manufacture of bee-keepers' supplies has kept pace with the wonderful increased demand for them. To do this, special machinery has been invented, and a number of large, well-equipped factories have been built. The years necessary to do this, have also developed a number of skilled workmen, in this special line, who can turn out almost perfect work. An order for a carload now can be shipped as promptly as a small order could a few years ago.

During this time a large number of small factories have sprung up, advertised their wares, flourished for a time, and dropped out, and why? Principally, I think, on account of the imperfect work done; for it is not possible, with poor and limited machinery, to compete with the larger institutions. Neither can they turn out goods as cheaply as those who buy and work on a much larger scale. Sometimes it is true the less freight helps the small concern, but usually this inducement is more than over-balanced by the work done.

In the future the small manufacturers, I think, will turn their attention to selling the products of the larger ones, and find it fully as profitable, for their sales will be increased by the liberal advertis-

ing the goods will have, which their own limited products could not pay for. When this comes about, we will have more uniformity in all we use, better and cheaper goods, more prompt shipments, and less liability to mistakes, which are so annoying when in a hurry for goods.

The man who starts a small factory almost always has an inventive turn of mind, and imagines his hive, frame, or whatever it may be, to be very superior, and often convinces the novice so that he buys, and starts out with something he will regret later on, especially when at some time he needs more, and finds his enthusiastic supply dealer has gone out of business, and he has to pay 20 per cent. extra for an odd size or special construction.

A few years ago there were hundreds of small cabinet shops scattered over the country, making furniture by hand or with light power, but they have all disappeared, so far as manufacturing is concerned. The large factories are doing it all, and we now get better and cheaper furniture. I predict the same future for the bee-supply trade.

M. H. HUNT.

L. A. Aspinwall—A small, illy-equipped establishment cannot compete with the large, well-managed concern. In the matter of sections, we may yet have to look for something cheaper than wood to use in their construction. Although not exactly in this line, I wish to say that I have experimented since 1888 in controlling increase. With other domestic stock we control increase, why not with bees? I can control increase with wooden combs by preventing the rearing of drones. The only difficulty is that all of the colonies in the yard must be supplied with wooden combs, because the drones, and the bees imbued with the swarming fever, mix in from the other hives. The wooden combs are costly, and I am now at work upon a plan whereby I hope to succeed without their use.

Next came an essay by Mr. H. D. Cutting, entitled,

#### Advantages that Bee-Keepers May Expect from Bees and Honey Having Been Exhibited at the World's Fair.

The subject assigned to me by our Secretary is "Advantages that bee-keepers may expect from bees and honey having been shown at the World's Fair." I will pass the bees by stating that it simply demonstrated the possibility of

exhibiting them at such a place for such a great length of time as they were on the Fair grounds.

But with honey it was different. The large and beautiful exhibit of honey was like an open book—a silent educator to the vast multitude of humanity that saw it so often. Such exhibitions will always popularize the use of honey.

I was in daily attendance (Sundays excepted) for nearly four months, and had every opportunity to study the different phases of the benefits of honey exhibits, and am well satisfied that to make the sale of honey popular, you must exhibit it in an attractive manner as much as possible. In many cases persons bought honey that said they never bought a pound before. In five different cases parties bought a single section, and came again and bought in 12 and 15 pound lots.

In my own case, I bought 300 pounds of what I considered the finest extracted honey on exhibition, and it is selling at 16 cents, and I can buy plenty of honey here at 7 cents that has not been at the World's Fair.

In Chicago, at the close of the Fair, comb honey went begging at 11 cents in several instances, when several lots that were on exhibition have brought from 15 to 20 cents. During the Fair honey sold in the majority of cases at 20 cents, the buyer willing to pay this price because it was on exhibition.

Several merchants that never handled honey before, were induced to buy honey to keep on sale, because it was so well exhibited at the Fair. In spite of the terribly depressed labor market, merchants informed me that they were selling more honey than ever before, and said much of it was attributable to the fine display of honey at the Fair, their customers always speaking of the exhibit.

Visitors at the Fair had an opportunity to see the different grades and test the quality of the many varieties on exhibition. It was one grand object lesson to all interested honey-producers. The many different grades, the manner of putting up, the different opinions in regard to grading, will not soon be forgotten. It showed to any observing person that the grades that had been adopted were "away off." Two different lots on exhibition were above any established grade. We should have an "ideal" grade—one that we should strive to work up to, then the producer that can put up that grade of honey on the market will get some extra pay for his knowledge.

I think it will be consuming valuable time for me to enumerate the many instances that would go to show the benefits of making large, beautiful and attractive exhibits of honey.

H. D. CUTTING.

The foregoing essay was read at the home of the *Review*, and there was no formal discussion following it. Mr. Hunt mentioned that his sales had been greatly increased by his exhibitions at the Fairs. The meeting here drifted into a social chat, and after sampling the California honey, the members said good night, to meet again in the morning at the usual place.

#### SECOND DAY.

The first thing on the programme when the association came together on the morning of the second day, was an essay from Mr. S. Cornell, of Ontario, Canada. It was entitled,

#### Moisture in the Bee-Cellar; What It Can Do and What We Can Do.

In the *Bee-Keepers' Review* for November I mentioned the fact, that when honey is consumed, a quantity of water is produced, which, when added to the free water in the honey, is equal to about  $\frac{1}{4}$  of the weight of the honey used. That is, 100 colonies, each consuming one ounce per day, or at the rate of about two pounds each per month, will produce over  $4\frac{1}{4}$  pounds of water per day.

In summer we often see small drops of clear liquid discharged by the bees, while on the wing. It is, I believe, generally agreed that these drops are the excess of water, either from the nectar gathered, or produced from the consumption of food. Bees have urinary organs which separate water from the blood, and carry it to the intestines to be discharged. But while confined to the hive in winter, they must depend wholly upon the evaporation which takes place in the breathing tubes, and at the surface of the body, to eliminate the superfluous water. The efficiency of evaporation for this purpose depends upon the dryness of the air breathed. If it contains not more than  $\frac{1}{4}$  of the quantity possible for it to contain at a temperature of say  $45^{\circ}$ , the heat of the cluster will probably make it greedy enough for moisture to take up, in the form of vapor, the water from the blood of the bees, as fast as it is produced. If the air in the hive is already saturated, the evaporation will be too slow, and

the blood will become overloaded; the urinary tubes will carry the excess of water to the lower bowel, and then we shall have what has been well named "abdominal distension."

The saturated air in the hive conducts the heat from the cluster much more rapidly, causing a larger consumption of honey to keep up the warmth, and this in turn aggravates the evil by producing more water, of which there is already a greater quantity than the air is capable of taking up. There are other evils, such as the thinning of the honey by absorbed moisture, causing it to ferment, and the germs of fermentation have been found in the intestines of diarrhetic bees, finding their way there, doubtless, in the honey.

Although the tendency is to cause the bees to have a decidedly dropsical appearance. These effects are not produced all at once. Under the most unfavorable conditions signs of disease are not noticed for some time after the bees are put into the cellar; but when the above causes are acting continuously, day in and day out, for months, it is not to be wondered at that the bees become diseased.

The remedy is to allow the moist air to pass out of the hive as fast as it is produced, and to replace it with dry warm air. I know that moist air may be got rid of in a downward direction by diffusion, but it will pass off at the top of the hive much more readily, because the breathed air is warmer, and therefore lighter, and because the specific gravity of the vapor with which it is saturated is only .6235.

The usual objection to upward ventilation is that it carries off the heat too rapidly, but there is no necessity for keeping a cluster of bees enveloped in their own breath to keep them warm. When putting my bees into the cellar a few weeks ago, I placed the bottom of the upper hive over the uncovered frames of the lower one, slipping it forward so as to leave about a quarter of an inch of the ends of the frames bare, to allow the vapor to pass out readily.

Last winter we had steady cold weather from start to finish. The best wintered lot of bees in these parts were in 48 hives, each of which had an inch auger hole in the end, half way between the entrance and the upper edge. About half the number were in single-walled hives; these were placed in an ordinary cellar. The remainder were in chaff hives, and were wintered on the summer stands. On the 15th of June 41 out of the 48 were alive, and 40 of these were

in good condition for the harvest. I had a chance to know, because I worked them on shares. This is an old method, but, I believe, one which has been generally successfully. For a covering to place over the frames there is nothing readily available which is better, as a transmitter of moisture, and at the same time a retainer of heat, than a good quilt of sheep's wool. I have used this, as well as other material, for years, and I know whereof I speak.

I shall not repeat what I said in the *Review* as to the rapidity with which the air in a cellar may become saturated with the moisture thrown off by 100 colonies of bees, as it can be readily referred to if necessary. I wish to emphasize the fact that a Mason hygrometer is necessary in order to know anything reliable about the condition of the air as to moisture. In my own little cellar containing 60 colonies, so far this winter, the dry bulb has not gone below 43°, with the wet bulb a degree and a half lower, indicating a relative humidity of 88, which is too damp, I think. The air came in through the sub-earth pipe at 42°, when the outside temperature was 17° below. The incoming air will be four or five degrees lower towards spring, owing to the gradual cooling of the ground around the pipe.

The remedy for damp air in the cellar is the same as for damp air in the hive, namely, change it for dry warm air. When writing my article for the *Review*, I had in mind a cellar beneath an ordinary dwelling, to contain not more than about 100 hives. Perhaps the greatest defect in the ventilation of such cellars is that the air is not drawn out fast enough. When the number of hives gets well up in the hundreds, such cellars are out of the question, and for indoor wintering a house should be built specially for the purpose. One thousand hives could probably be piled so as not to occupy much over 2,000 cubic feet, displacing not much over 1,500 cubic feet of air, but if the apartment were only just large enough to contain the bees, I fear that in ventilating it properly, the bees would be injured by currents. To avoid this, the cubic capacity of the apartment should be at least three or four times as much as the space occupied by the hives.

To any one contemplating building such a house, I would most strongly recommend that he communicate with Isaac D. Smead & Co., of Toledo, O. They will furnish plans and specifications for carrying out their method of ventilation. I have lately had corres-

pondence with the branch of the firm doing business in this country, and I learn that the cost for furnaces and attachments would be about \$75. I shall not take up time speaking of the success of their system of ventilation and warming. That can be learned on inquiry. For this system the house should be two stories high, or one story and a basement. The bee-room would be on the second flat. Suppose the room were 25x40x9 feet—this would give 9,000 cubic feet. Such a building might have a work-shop and store-rooms below, and store rooms in the attic also. The bee-room would be a grand place for evaporating honey, either extracted or in the comb. It would be far ahead of any curing-room yet recommended. To an extensive bee-keeper the cost of such a wintering house should not be an obstacle. Farmers whose profits on the capital invested are perhaps not greater, are obliged to build more expensive buildings in which to store their produce, and protect their stock.

Such a wintering house would require daily observation and attendance, but warming and ventilation for 1,000 hives cannot be made automatic, with the best results, in our Northern climate. The plan recommended will place both temperature and change of air under control, and will insure success if anything will.

S. CORNELL.

Several members mentioned that the Smead system of ventilation had not always been satisfactory; that the odor from the closets sometimes entered the rooms. It was thought, however, that this trouble might arise from a lack of fires in the furnaces, and this condition would not arise in the ventilation of beecellars.

L. A. Aspinwall—The great amount of water that is found in the systems of the bees in winter, comes, I think, from the absorption by the honey of the moisture of the atmosphere. This is especially the case if the honey is unsealed. One difficulty with cellar-wintering is, that there is so much trouble and attention required in keeping the temperature at the proper point.

Pres. Taylor—I think that cellar-wintering causes much less labor and trouble than that of any other method.

L. A. Aspinwall—It may be so now, but we may yet have a better system of out-door wintering.

Wm. Anderson—I think the question of food has more to do with safe wintering than has that of moisture. If we

keep away the nitrogenous food, the bees will be all right.

Pres. Taylor—There are some things that make me doubt the importance of moisture in the wintering problem. For instance, I have had bees winter well when the inside of the hives were dripping with moisture, and the combs covered with mold. Then, again, my cellar is well ventilated. The chimney extends down to the cellar bottom, and there is an opening at the bottom of the chimney. Usually the bees winter well, but they have not always done so. So far as I have been able to discover, the conditions of moisture and ventilation have been about the same each year. I do not think that the conditions in this direction have been sufficient to account for the difference in the wintering of the bees.

W. Z. Hutchinson—The difference in the food and the difference in the weather, or the temperature, of different winters account in great degree for the varying success in wintering bees in-doors and out. Suppose the food is of an excellent character, and the winter severe. The bees in-doors will winter in an excellent manner, while those out-of-doors will suffer from the severe weather. If the winter is "open," those out-of-doors will have frequent flights, and come through the winter in the best possible condition. If the stores are poor, and the winter severe, those in-doors may pull through with some losses, while those out-of-doors will be almost entirely swept away. In a warm winter, with unsuitable stores, the bees out-of-doors may come through almost as well as with the best of stores, the frequent flights preventing the over-loading of the intestines. These two factors—difference in stores and difference in the temperature of winters—explain a great many of the vagaries in wintering.

Wm. Anderson—I think spring dwindling ought to be considered. There are more bees lost from this than die in the winter.

Pres. Taylor—I think spring losses are the result of imperfect wintering. The bees retain their feces until they are weakened thereby, and then comes a chance to fly, and they are apparently healthy, but soon die as the result of the tax that has been placed upon their vitality. This is called "spring dwindling."

L. A. Aspinwall—I think we overwork our bees. Instead of going into winter with young bees in the full vigor of life, we work them until they are

just ready to die, and then expect them to winter well.

Wm. Anderson—I think bees that work best winter the best.

Pres. Taylor—I notice Mr. Cornell speaks of seeing the bees eject water when flying from their hives. I have seen the same thing, but I question whether it is always water that has been taken from the system by means of the urinary organs. For instance, I have fed bees thin sugar syrup towards evening, and they would fly soon after and discharge this water. It seems to me that they flew too soon to have had time for the water to have entered the system and passed through the urinary organs.

(Concluded next week.)



FROM "THE STINGER."

The new engraved heading that *Gleanings* has hoisted over Dr. Miller's "Stray Straws" is in a bad tangle; the spider-web arrangement that is used to hold the straws together, seems to have encountered a Western cyclone.

What a heathen *Gleanings* is getting to be! In the last issue of that paper for the year so recently ended, is a short editorial which thoroughly astonished me. I expected to see the editor of that magazine wish his readers a "Happy New Year." But he did not do it; it really seems that the editor has queer views on the custom of wishing one's friends and neighbors the usual compliments of the season—"stereotyped platitudes of the season," he calls them. The good old times when everybody and his neighbor tried to be merry and happy are passing away, and instead we are having a period where the motto seems to be, "Hustle for yourself and leave me alone." It is no wonder that the country is seeing such dull times. If things keep going from bad to worse, as they have for some time past, it is hard to tell where we shall land. Nothing helps to buoy up a disheartened brother more than a kind word spoken to him at that season of the year when the whole Christian world rejoices in the birth of a Saviour, and the ushering in of a new year.

*Gleanings* in its improved form is fair to look upon; a sweet maid of sixteen could not be more charming. There is yet one thing about it that does not suit the eye of "The Stinger," and that is the ugly head-

ing that is used for the title of the magazine at the beginning of the reading matter. I prefer plain, modest type, something after the style of the *Review*.

And the AMERICAN BEE JOURNAL is guilty of the same crime, in my eyes. Discard that cumbersome engraved title, and use plain type. Take *Scribner's*, *The Cosmopolitan*, *Harper's* or the *Century* for a model. How much neater the headings of these magazines look, than engraved ones. Nuf sed.

I notice that Dr. Miller is still "pulling" those queens through the columns of the bee-papers. Keep on, Doctor, and they will be well "pulled" by the time you get through with them—they will not even have any hair upon them.

Rambler is getting to be a paragrapher, and his first attempt in that line is given in the first issue of *Gleanings* for this year. He calls them "California Echoes." I think it would have been better to have labeled them "Rambling Echoes," as they do not seem all to come vibrating upon the air from o'er the Sierras or the Rockies, but rather from various quarters.

*Gleanings* has an article on "Apiculture in Chile," in the last issue that has reached me. I have never eaten any Chile honey, for the reason that it is gathered during our winter months, and I am afraid that it would make me chilly to eat it. I want my honey so that it will not make my teeth go chit-a-chatter. Colorado honey is about right for me, though I can stand Eastern honey very well.

A correspondent of *Gleanings* tells of the "oldest bees in the world." They were found wrapped in the winding sheet of a mummy—one of the Pharaohs. I suppose the bees were "laid to rest" with "the late lamented" king, so that they might sting him and keep him warm.

But I have heard of a frog that is older than those bees. It was found away down in the bowels of the earth in Oregon. When the poor old fellow was released from the earth that had been his home for 30,000 (?) years, he hopped out as lively as a cricket, and winked at a pretty girl that stood not far off. Now, trot out your bees that have been hibernating as long as that frog was, and I will take pleasure in going several thousand miles to see them.

Jake Smith is at it again in *Gleanings*. That funny fufosofer has been foolin with beez agin, and I do declare if he does not look out for his self, he will find his self in a lunytick asilum. I haint no dokter, but I no what I am talkin of.

W. P. Root's ancient bee-books are going to get a set-back by the editor of *Gleanings*. That's too bad; I wanted to see the poor old books get ample justice done them, and Mr. Root was doing all he could to give

them a final send-off. I think I shall have to say "R. I. P.," as they say on the grave-stones.

A. I. Root evidently intends to bring a suit for slander or libel against certain persons in southern California, for making certain damaging statements about him. I hardly thought Mr. Root would have had recourse to the law in such a matter, for some of us mortals have come to think that he would be more likely to forgive his enemies. Though I am inclined to be as Christian-like as possible, I think there are times when a man is justified in giving his traducers "a good licking." How I would like to see Uncle Amos trounce one of those burly fellows who have been unduly injuring his good name! (See *Gleanings*, page 942.)



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

#### Bees Booming in Texas.

Bees are booming to-day—Jan., 21st. They are gathering pollen on elm for the first time this year in North Texas.

Tioga, Tex.

EDWIN COOK.

#### Mellilot or Sweet Clover.

I am surprised that some bee-keepers have so little knowledge about mellilot or sweet clover. I have raised this clover more or less for over 20 years, and will say to-day, take it away from me and I would quit bee-keeping. I have had but two failures in 20 years, that is, it has always yielded honey every year except in two years. It is like all other honey-plants, it yields more in some seasons; and as to the quality of the honey, it is good honey—not of the very light kind, but good. Mr. M. M. Baldridge had a sample of the honey (extracted) at the convention in Chicago last October; it was of the very best, good, heavy honey, and light in color.

As for stock eating sweet clover, they will do it readily, after they get used to it. There is no plant that can stand the drouth equal to it. There is no plant that can be sown that will fertilize the land equal to it. It has been tried in England, and has been given the preference over all the plants to fertilize the ground.

As an experiment, the Ohio station took a piece of land that had been stripped of all the good land at a brick-yard, or where the good land had been taken to get at the clay to make brick. They sowed two or three crops of mellilot on this clay, then sowed it to wheat. At the same time they sowed the same amount of good land to wheat right beside the brick-yard, and the clay ground beat the good land as to the amount of pounds of wheat. This clay could not have raised anything if it had not been for the mellilot or sweet clover. The time is not far off when it will be sown more extensively to enrich the land. I have ten acres growing on my place now.

Compton, Ills.

R. MILLER.

#### Famer Jones' Bee-Notes.

Thar's one way of preventin' swarmin' I aint seen in the papers yit, an' that is, keep your bees in a cool, dark cellar. Of course you don't git much honey that air way, but then I tried takin' away brood from mine las' summer, an I dunno but what I got about as much honey as I would if I'd kept 'em in the cellar.

The trouble about takin' away brood is, you dunno when to begin; but if you've got some yellar blood in 'em, you generally know when to stop.

I live purty high; that is, on a hy hill, but nobody ever called me "stuck up" until I got ter italianizen my black bees. I'll have ter confes I am stuck up a good eel nowdays.

I notiss ever sense I got that testy queen (I think that's what they sed she was) that mos' all the bees that cum out to the feeled to sting me have considerbul yellar on 'em. I spose that's why they call 'em "testy queens."

My wife says she beleeves the bee-books ud be all rite if they wouldn't teech so much artfishul swarmin'. She says natrul swarmin' is enough for her without goin' an makin' 'em swarm artfishully.

I yuster think if a queen was yellar enuff she was a pure italyun.

I allus sposed pets was inclined to git lazy, but they say you can pet these here italyun bees as much as you're aminter, and they'll move around lively.

HIBRED JONES.

#### Another Skunk Remedy, Etc.

It is decidedly amusing to me, at least, to read of the various methods prescribed for "Mrs. Atchley's skunks." I would smile to see the writer under the heading of "Random Stings," dispose of his Skunkship after said skunk had "pressed the button." At the same time I would want a deoderizer convenient. I would not use the words of Lincoln's assassin—"Sic Semper Tyrannus," but as I have noticed, "Many prescribe, but few take the medicine."

Now let me add my mite to the general fund, and I hope the lady will not be offended at my weak criticisms. I am a trapper of 30 years' practice, and I think I

have killed more of the "varmints" than Stinger ever saw. My plan is to take a small lump of lard, about the size of a filbert (if the nights are not too warm to melt it; if so, take tallow); cut the piece in halves, hollow out the center, and put about the full of a gem cap of powdered strychnine in the cavity. Press the halves gently together, and place the "pill" on a board in front of the hive. But keep the dog, cat, and chickens housed up until you can take up any that is left in the morning.

A skunk will not go 50 yards until he goes to rest, and you need not "press the button" either, nor yet need the atmosphere purified.

The above dose will kill a fox before he goes 100 yards.

For the past two weeks there have been only a few days that the bees did not fly more or less. I have one colony, apparently in good condition, that has drones flying—a thing I never heard of in this county at this season. All appear to be doing well. Bees are flying now.

I heartily agree with Mr. McEvoy in regard to his foul-brood theory on page 8, and its increase is by carelessness.

"Should the farmer keep bees?" I say "No." My experience among the farmer's bees leads me to this conclusion. For years I have been called to 5 or 10 miles to attend to a farmer's bees. I invariably find them in the worst condition possible. A man with an ordinary-sized farm usually has enough to do in spring-time (the season when bees need to be looked after) without looking after the bees. I don't think there is one farmer in fifty that would profit by keeping bees. I do not know any of them, at least.

T. C. KELLY.

Slippery Rock, Pa., Jan. 8, 1894.

#### Not Very Encouraging.

I invested \$80 last spring for bees, hives, etc., and never got a pound of comb honey—the worst season in this part of Kansas in eleven years. I had 26 colonies on July 1st, but the dry weather and hard winds played havoc with fall resources, so I doubled back to 16 colonies, 8 of which were fair, and the remainder needed feeding through the winter. W. EMMETT POTTS.

Edna, Kans.

#### The Season of 1893.

I may say, as nearly as I can tell, the average for the honey product has not been over 25 pounds per colony, spring count, the past season here. Our bees just more than rolled the honey in the last of the six months (or June), but near the middle of July nectar seemed to dry up, and that was the end of the honey-flow for this year.

Last spring, in the last of three months, I lost a queen. I found her dead on the bottom-board. I sent \$5.00 to Texas for a daughter of an imported queen, and on April 22nd I received her. She came through a snow storm in Michigan, with

instructions how to introduce her. After five days I opened the hive and found her accepted and laying. On May 22nd she had brood hatched, and lo, the golden bees appeared! I tell you she is a beauty, though much smaller in size than the queens I rear.

She had a fair colony of bees to commence with. I concluded I would let her alone and see what she would do. The little thing filled a 10-frame Langstroth hive full. Two combs on each side of the hive were full of honey. I weighed a similar comb, and it weighed 8 pounds. The other six combs were nothing but bees, brood, and honey. This was in September. They had 10 pounds in sections, sealed and in good condition. If we had had a fall flow, I think I would have gotten 30 pounds of section honey. This was doing pretty well, I think.

I am now closing up my sales of honey. I have sold my crop at 15 cents per pound, and 12½ cents for extracted. I wish I had a ton of my own producing—I could easily dispose of it. People in this part of the city are a little averse to granulated sugar called "honey."

JACOB MOORE.

Ionia, Mich., Dec. 15, 1894.

#### A Little Bee-Experience.

As I talked with several of my neighbor bee-keepers, or so-called bee-keepers, as I call them, I asked one the other day how his bees did last summer, and in answer he said: "I don't know. I haven't looked yet to see if they had any honey or not." Then I asked him how he was going to manage them if they didn't have stores enough to winter on. "Why," he said, "let them starve, because it don't pay to feed them."

I asked him why it wouldn't pay, to which he replied, "Because bees and honey are both too cheap." But that's just where those fellows miss it; and then in the fall, when Jack Frost is on hand, they sneak around their hives to see if there is any honey or not, and if they do get a few pounds, they rush it to market and sell it for a few cents—and it really isn't worth very much, because it's in all and every shape except the proper way. Then they ruin the market for something that is first-class.

As it is not paying to feed bees if they haven't enough stores to winter on—why don't these same folks turn their horses out during the winter, and in the spring of the year go and round them up, slap the harness on, and go to work on their crops? But I suppose they wouldn't get along very far in the world that way. It's just like this: They don't read any bee-books or papers, and consequently they don't know any more than to keep bees in the old box-hives or mouse-traps; but if one talks with them they know it all, and you can't convince them, either.

I asked some of them to subscribe for the AMERICAN BEE JOURNAL. I told them that it costs only \$1.00 a year for a weekly paper; but they said: "You might just as

well throw that \$1.00 out in the middle of the road."

There is only one bee-brother in my locality (Mr. E. J. Weakley) who gets any results from his bees, but he and I are among Mrs. Atchley's A B C scholars.

In regard to the brace and burr comb trouble, I think if bee-keepers would use the Hoffman fixed frames altogether, they would get rid of brace and burr combs. Another great thing they would get rid of, and that is the honey-boards.

The bees in this locality were a fizzle the past year; that is, as far as surplus honey is concerned, but they had plenty of winter stores; that is, those that were stimulated a little through brood-rearing, and that were strong. I winter mine in the cellar.

The "Old Reliable" is a welcome visitor every week. I think the BEE JOURNAL is worth its weight in gold to any beginner.

Washington, Kans. J. H. RUPP.

### Something About Marketing Honey.

Dr. Miller, it seems from his writing on page 817 of a December number of the BEE JOURNAL, cannot get a good price for his honey, or at least he so stated it. Let me say that 24 cents per pound is a little high for extracted honey, besides 10 cents for the 5-pound pail, but it must be remembered that when you go to the store, or any place else, to get a pound of honey in the comb, you generally get a 4 $\frac{1}{2}$  x 4 $\frac{1}{4}$  section. Such a pound generally weighs from 14 to 15 ounces—sometimes less. Now, Doctor, when you go again to sell extracted honey, if you produce any, or all who do produce and sell it, do not forget to tell those customers that when they buy the section honey they do not get a pound of honey, besides about one ounce off for the useless box.

Do not forget to tell them that it is not "strained honey," but extracted with a machine made for that purpose; it does not contain any pollen, and is not boiled or heated to give it any bad taste. Wax is not digestible, therefore not wholesome, and it is another good point in favor of selling extracted honey.

I get from 15 to 20 cents per pound, and sometimes more, for extracted honey. With me, the best packages for selling extracted honey are the Mason pint and quart jars. I find it hard to sell comb honey at the same price per box as I get per pound for the extracted. THEODORE BENDER.

Canton, O.

### Rearing Extra-Large Queens.

On page 21, Dr. E. Gallup appears to think that Charles White was not badly hurt about what he (Gallup) said about the light-colored bees. No, indeed, Doctor; instead of being hurt, I am well pleased. The article you speak of, on page 631, was intended to make you talk on queens, for I did not think you practiced what you wrote, and to see how near our ideas are alike, was the object of my reply to your article; for I am ready to agree that the

color of the bee has nothing to do with its working qualities, and very little with its disposition. We can breed in, any good or bad qualities at our pleasure.

I have claimed for a long while that we could beat Nature in producing fine queens. It is asserted that there are no queens as good as those reared under the swarming impulse, while I claim that there are better queens reared artificially than those reared by natural swarming. A colony of bees that has cast a swarm is not in the best possible condition to rear young queens, or, in other words, it is not in a "normal condition," as the colony should be to have the best results. Of course there are exceptions, but as a general rule there is too much excitement among bees that intend to swarm.

Now let us see how near the Doctor and I agree on this statement. The Doctor says, on pages 21 and 22, that the queens that he found in the hives where the old queen had been superseded, were very large, and very prolific, and their bees appeared to be larger. Now why should those bees rear finer queens and larger bees than the Doctor was used to seeing in Canada? For this reason—that the bees were in a normal condition, and not excited as they would be if they were preparing to swarm; therefore, I claim that we can prepare a colony of bees for queen-rearing that will beat natural swarming, rearing fine queens, either light, dark, gentle or vicious, good workers, or loafers, just as we make our selections of eggs or larvae.

Aurora, Nebr.

CHAS. WHITE.

### Convention Notices.

WISCONSIN.—The Wisconsin Bee-Keepers' Association will meet in Madison, Wis., on Feb. 7 and 8, 1894. An interesting meeting is expected. It is earnestly hoped there may be a full attendance. J. W. VANCE, Cor. Sec. Madison, Wis.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1894, at the apiaries of Thomas Willett, 5 miles northeast of Bronson, Bourbon Co., Kansas. All are invited to come. J. C. BALCH, Sec. Bronson, Kans.

**Honey as Food and Medicine** is just the thing to help sell honey, as it shows the various ways in which honey may be used as a food and as a medicine. Try 100 copies of it, and see what good "salesmen" they are. See the third page of this number of the BEE JOURNAL for description and prices.

**A Binder** for holding a year's numbers of the BEE JOURNAL, we mail for only 50 cents; or clubbed with the JOURNAL, for \$1.40.

**Have You Read** page 133 yet?

## Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 4, 1893.—There were but few shipments of honey to this market last week. The cold weather started business up, and honey moved some better than heretofore. Fancy and No. 1 is getting scarce, and prices are on the upward tendency. Fancy, 16c.; No. 1 white, 15c.; fair, 14c. Extracted is moving slowly with plenty to satisfy demand. Beeswax, 20@22c. J. A. L.

CINCINNATI, O., Jan. 18.—Demand is slow. Supply is plentiful. We quote: Comb honey, 12@15c. for best white; extracted, 5@8c.

Beeswax is in fair demand, at 20@23c. for good to choice yellow. Supply is good.

C. F. M. & S.

ALBANY, N. Y., Jan. 14.—The honey market is in a slow and unsatisfactory condition. Very little demand for any and large stocks of both comb and extracted. Quotations would be only nominal.

H. R. W.

CHICAGO, ILL., Jan. 25.—While the volume of trade in honey is not large there is an improved tone thereto. We obtain 15c. for the best grades of white comb and our stock of this is not large. Grades not quite so good are selling at 14c., with buckwheat and other dark honeys bringing 11@12c. The weather has been too severe recently to permit of shipments being made. Extracted honey we quote at 5@7c. per pound according to quality and style of package. Beeswax, 22c.

R. A. B. & Co.

NEW YORK, N. Y., Jan. 24.—There is no change in our market. Trade remains dull with plenty of stock on hand of both comb and extracted honey. Beeswax is selling on arrival at 26@27c.

H. B. & S.

CHICAGO, ILL., Jan. 18.—The ruling price for fancy white comb honey seems to be 13c. Other grades of comb will bring from 10@12c. Extracted is selling at 6c. Hard times cause restricted demand.

S. T. F. & Co.

KANSAS CITY, Mo., Dec. 21.—The demand for comb and extracted honey is not as good as we would like to see it. We quote: No. 1 white 1-lb. comb, 14@15c.; No. 2 white, 13@14c.; No. 1 amber, 13@13½c.; No. 2 amber 10@12c. Extracted, white, 6@7c.; amber, 5@5½c.

C.-M. C. Co.

"A Modern Bee-Farm and Its Economic Management," is the title of a splendid book on practical bee-culture, by Mr. S. Simmins, of England. It is 5½x8½ inches in size, and contains 270 pages, nicely illustrated, and bound in cloth. It shows "how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man." It also illustrates how profits may be "made certain by growing crops yielding the most honey, having also other uses; and by judgment in breeding a good working strain of bees." Price, postpaid, from this office, \$1.00; or clubbed with the BEE JOURNAL for one year, for \$1.60.

## List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

### Chicago, Ills.

J. A. LAMON, 44 and 46 So. Water St.  
R. A. BURNETT & Co., 161 South Water Street.

### New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.  
HILDRETH BROS. & SEGELKEN,  
28 & 30 West Broadway.  
CHAS. ISRAEL & BROS., 110 Hudson St.

### Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.  
CLEMOMS-MASON COM. CO., 521 Walnut St.

### Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

### Hamilton, Ills.

CHAS. DADANT & SON.

### Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Catalogues for 1894 are on our desk from the following:

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